



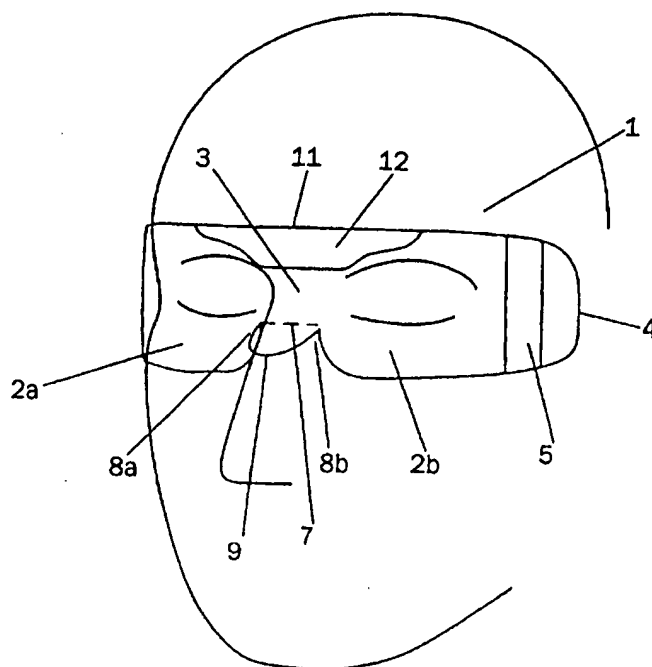
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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| (51) International Patent Classification 6 : A61F | A2 | (11) International Publication Number: WO 97/21397 (43) International Publication Date: 19 June 1997 (19.06.97) |
| (21) International Application Number: PCT/NZ96/00137 (22) International Filing Date: 9 December 1996 (09.12.96) (30) Priority Data: 280639 8 December 1995 (08.12.95) NZ (71)(72) Applicants and Inventors: CORKILL, Bruce, David [NZ/NZ]; 62 Oroua Street, Eastbourne 6008 (NZ). TAYLOR, Gerard; Daniel [NZ/NZ]; 330A The Terrace, Wellington 6001 (NZ). (74) Agent: WEST-WALKER, Gregory, James; Russell McVeagh West-Walker, The Todd Building, Level 5, 171-177 Lambton Quay, Wellington 6001 (NZ). | | (81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>Without international search report and to be republished upon receipt of that report.</i> |

(54) Title: PROTECTIVE EYEWEAR

(57) Abstract

Protective eyewear comprises an elongated sheet of flexible material comprising either two transparent viewing areas separated by a central area or a single transparent viewing area extending substantially the full width of the transparent sheet. Means for attaching the eyewear to the wearer comprises at least two skin-compatible adhesive areas on either side of the elongated sheet.



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PROTECTIVE EYEWEAR

FIELD

- 5 This invention comprises a novel form of protective eyewear for protecting a wearer's eyes against damage from physical or non-physical elements.

BACKGROUND

- 10 Eyewear such as spectacles or goggles which provide protection for the eyes by acting as a physical barrier is known. Similarly, eyewear which protects a wearer's eyes against the harmful effects of ultraviolet radiation is known in the art. Such spectacles or sunglasses are held on the wearer's face by arms at either side which enables the glasses to rest on the wearer's nose and ears.

15

Although such arms can be folded inwards to reduce the size of the eyewear when not on the wearer's face, they can easily be crushed if the eyewear is put into a handbag, pockets, or is otherwise left unprotected. While such eyewear can be carried around in a case for protection, this adds to the size and inconvenience of the eyewear.

20

SUMMARY OF THE INVENTION

The present invention provides an inexpensive, lightweight, disposable means of eye protection.

25

In a broad aspect this invention provides protective eyewear comprising an elongated sheet of flexible material having two longitudinal sides and two transverse edges, and comprising two transparent viewing areas separated by a central area or a single transparent viewing area extending substantially the full width of the transparent sheet, and a means for attachment to the wearer comprising at least two skin-compatible adhesive areas located on one face of the elongated sheet, at least one adjacent each outer side edge of the elongated sheet.

Preferably a nose flap extends centrally from one longitudinal edge of the elongated sheet.

Preferably a spacer flap extends centrally from the other longitudinal edge of the elongated sheet, which is foldable to space the upper longitudinal edge of the eyewear from a wearer's forehead.

Preferably each adhesive area is protected until use by a release sheet.

Preferably the release sheet is removable in sections enabling reuse of the protective eyewear.

Preferably a transverse fold line is formed between the longitudinal sides of the elongated sheet towards each side edge of the elongated sheet, adjacent the adhesive area or areas at each end, to enable folding over of the outermost side portions of the elongated sheet carrying the adhesive to protect the adhesive area(s).

Preferably the eyewear is produced in the form of a long continuous sheet containing a number of eyewear pieces.

Preferably the transparent viewing area is formed from a tinted material.

5

Preferably an opaque border is printed on the elongated sheet around or partially around the transparent viewing area(s).

DESCRIPTION OF THE DRAWINGS

10

A preferred form of eyewear of the invention will now be described, by way of example only, with reference to the accompanying drawings in which:

Figure 1 is a three-quarter perspective view of eyewear according to the present
15 invention demonstrating the folding directions of the centrally extending spacer flap and the nose piece as indicated by the bold arrows;

Figure 2 is a diagrammatic front view of the eyewear in position on a wearer's head;

20 Figures 3a and 3b are plan views of the eyewear demonstrating folding of the outermost side portions of the planar sheet; and

Figure 4 is a plan view illustrating production of the eyewear in a continuous sheet.

25

DESCRIPTION OF THE PREFERRED EMBODIMENT

Figures 1 and 2 show the preferred form eyewear 1 comprising an elongated planar rectangular-shaped sheet 2 of flexible transparent material. The sheet 2 has two planar viewing areas 2a and 2b. Each viewing area covers one eye of the wearer and the areas 2a and 2b are separated by a central area 3 which extends across the wearer's nose in use. The sheet 2 terminates at the outer side edges 4 of the eyewear. An adhesive means 5 is located adjacent each outer side edge 4, each adhesive means being protected when not in use by a release sheet 6.

10

An alternative embodiment is shown in Figure 3b wherein the release sheet 6 is removable in sections 6a, 6b, 6c, 6d, allowing the eyewear to be re-used by removing a different section of release sheet at each instance of use. The sectioned release sheet can be adapted for use in other embodiments of the eyewear, including for example, the embodiment shown in Figure 1.

15

The bottom edge 7 of the central area 3 has two inverted V-shaped areas 8a and 8b cut into it to allow the eyewear to bend easily across a wearer's nose. In the preferred form, for comfort and additional stability a nose flap 9 extends centrally from between the two V-shaped areas 8a and 8b to rest on the wearer's nose. Also in the preferred form continuous with the upper longitudinal side 11 is an upwardly extending spacer flap 12.

20

The eyewear may comprise, instead of two separate viewing areas separated by a central area which may be opaque, a single transparent viewing area extending substantially the full width of the transparent sheet.

25

An alternative embodiment is shown in Figures 3a and 3b wherein a fold line 13 enables the outermost side portions of the sheet 2 carrying the adhesive means 5 to fold inwardly to protect the adhesive means 5 when not in use. An advantage of this embodiment is that it eliminates the need to protect the adhesive means with a
5 separate release sheet.

Air holes can be located at each outer side edge of the viewing areas to allow circulation of air between the eyewear and the wearer's face.

10 In use the eyewear is placed against the wearer's head so that viewing areas 2a and 2b cover the wearer's eyes. The wearer either removes a release sheet 6 from each of the adhesive means 5 on each side or unfolds the outermost side portions of the sheet in the embodiment of Figures 3a and 3b, and places the eyewear over his/her eyes and affixes the adhesive means 5 to either side of his or her face, thereby holding the
15 eyewear in place. The nose flap 9 is bent outwards, enabling the eyewear to comfortably rest on the wearer's nose. Prior to fitting the eyewear the spacer flap 12 is folded inwardly, so that in use it will rest against the wearer's brow to space the upper longitudinal side 11 from the forehead and hold the eyewear slightly away from the wearer's face.

20

The adhesive means of attachment of the eyewear means that the eyewear can be used in situations where traditional types of glasses may be easily broken or lost, for example, the eyewear is ideally suited for physical activities and contact sports.

25 Preferably the eyewear is made from a flexible and transparent material such as plastics material. However, other materials such as cellulose may be used. The

material may be tinted to form sunglasses or may be clear to form "rainglasses" for sports or other outdoor activities for example.

Graphic material may be printed directly on to the elongated sheet such as an (opaque)
5 stylised border around the transparent viewing area(s) for example.

As shown in Figure 4, the eyewear can be produced from a continuous sheet of material from which each eyewear piece is die cut for example, with each eyewear piece lying parallel along its longitudinal axis to the adjacent eyewear piece to allow
10 maximum use of the available material. The adhesive 5 is applied to the sheet on either side as shown.

The foregoing describes the invention including preferred forms thereof. Alterations and modifications as will be obvious to those skilled in the art are intended to be
15 incorporated within the scope hereof, as defined in the accompanying claims.

CLAIMS

1. Protective eyewear comprising an elongated sheet of flexible material having two longitudinal sides and two transverse edges, and comprising two transparent
5 viewing areas separated by a central area or a single transparent viewing area extending substantially the full width of the transparent sheet, and a means for attachment to the wearer comprising at least two skin-compatible adhesive areas located on one face of the elongated sheet, at least one adjacent each outer side edge of the elongated sheet.
- 10
2. Protective eyewear as claimed in claim 1, wherein a nose flap extends centrally from one longitudinal edge of the elongated sheet.
3. Protective eyewear as claimed in claim 2, wherein a spacer flap extends
15 centrally from the other longitudinal edge of the elongated sheet, which is foldable to space the upper longitudinal edge of the eyewear from a wearer's forehead.
4. Protective eyewear as claimed in any one of claims 1 to 3, wherein each adhesive area is protected until use by a release sheet.
- 20
5. Protective eyewear as claimed in claim 4, wherein the release sheet is removable in sections enabling reuse of the protective eyewear.
6. Protective eyewear as claimed in any one of claims 1 to 5, wherein a
25 transverse fold line is formed between the longitudinal sides of the elongated sheet towards each side edge of the elongated sheet, adjacent the adhesive area or areas at

each end, to enable folding over of the outermost side portions of the elongated sheet carrying the adhesive to protect the adhesive area(s).

7. Protective eyewear as claimed in any one of claims 1 to 6, wherein the
5 eyewear is produced in the form of a long continuous sheet containing a number of eyewear pieces.

8. Protective eyewear as claimed in any of the preceding claims wherein the transparent viewing area is formed from a tinted material.

10

9. Protective eyewear as claimed in any one of the preceding claims wherein an opaque border is printed on the elongated sheet around or partially around the transparent viewing area(s).

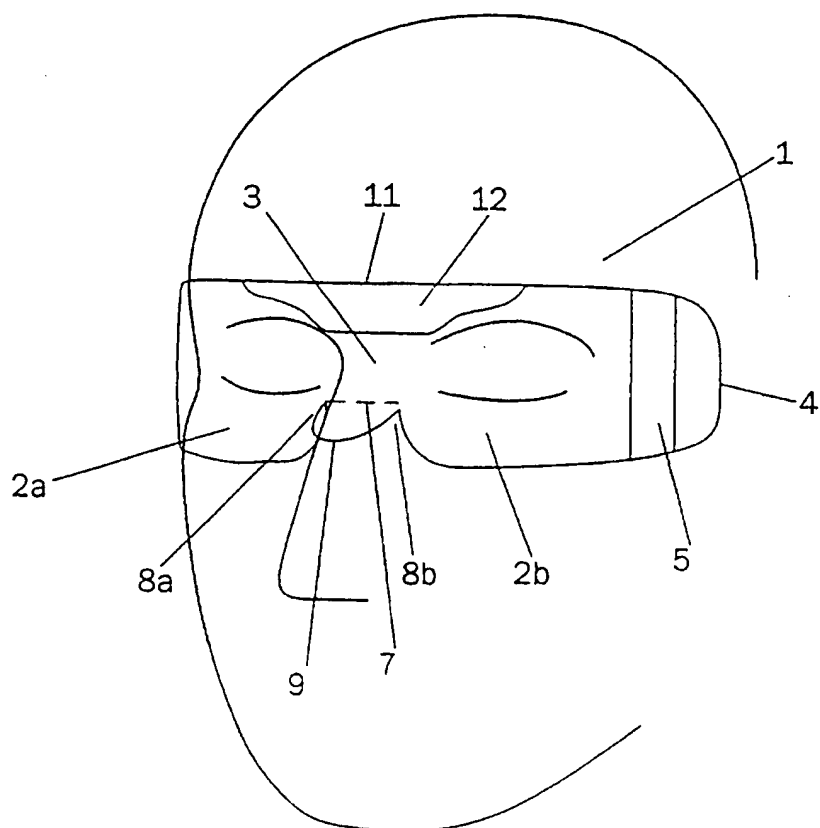
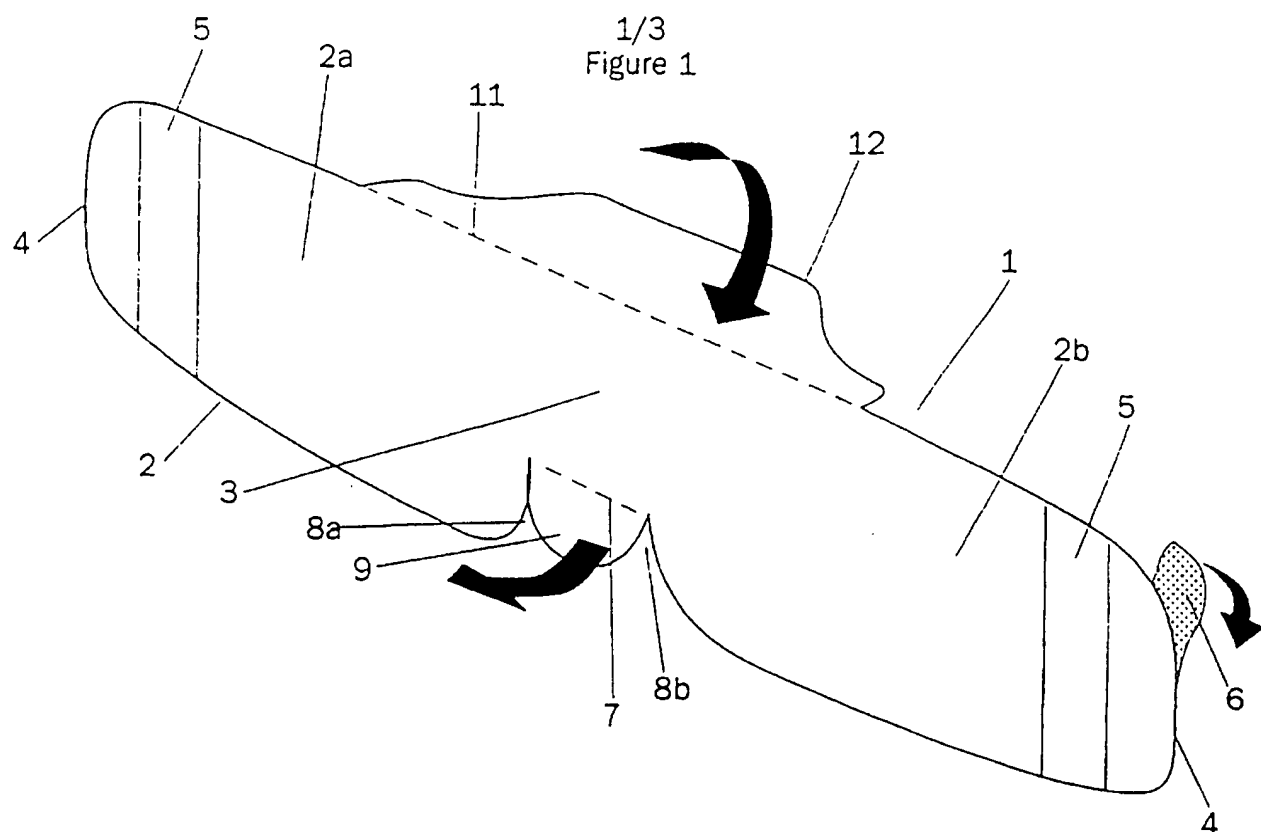


Figure 2
SUBSTITUTE SHEET (RULE 26)

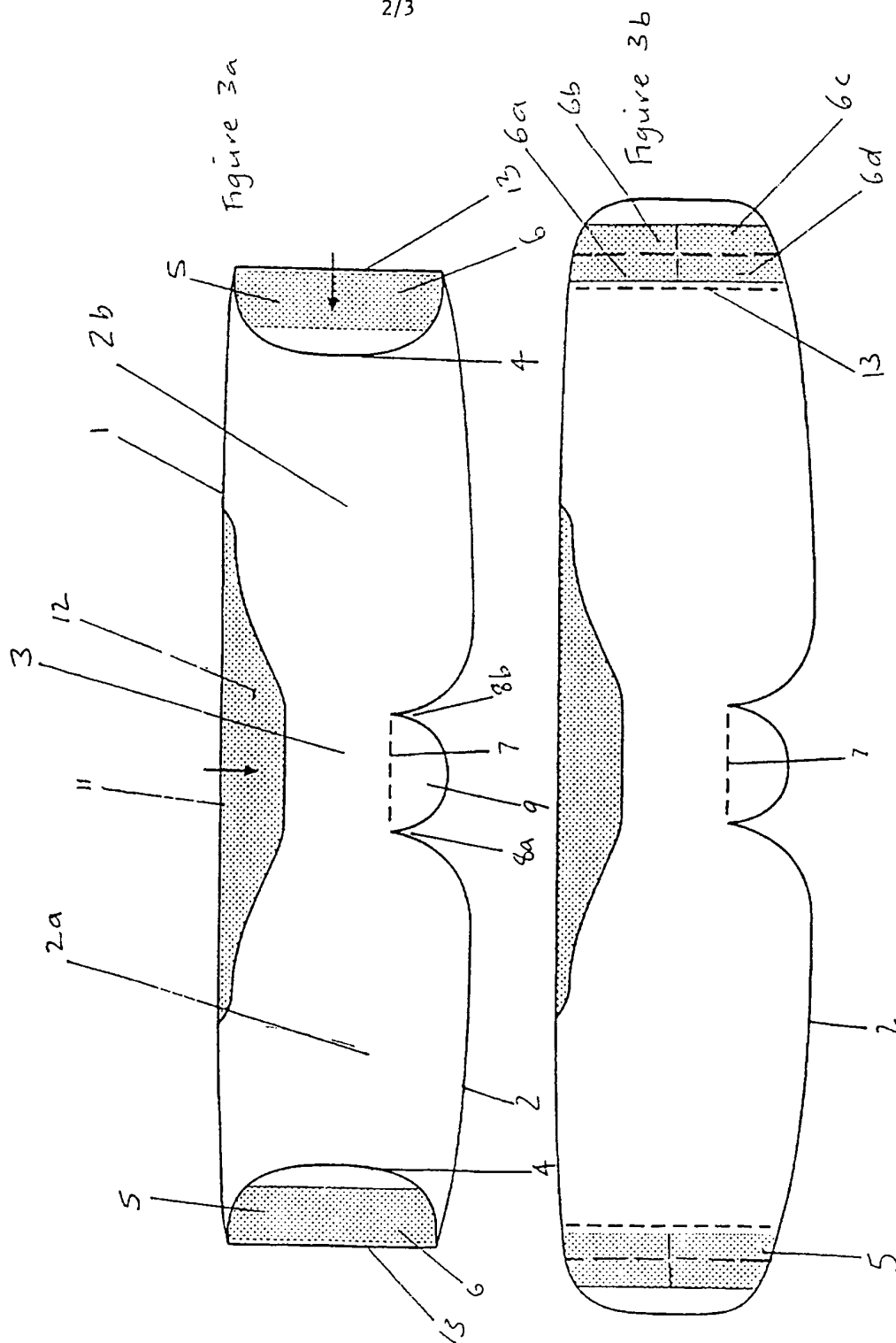
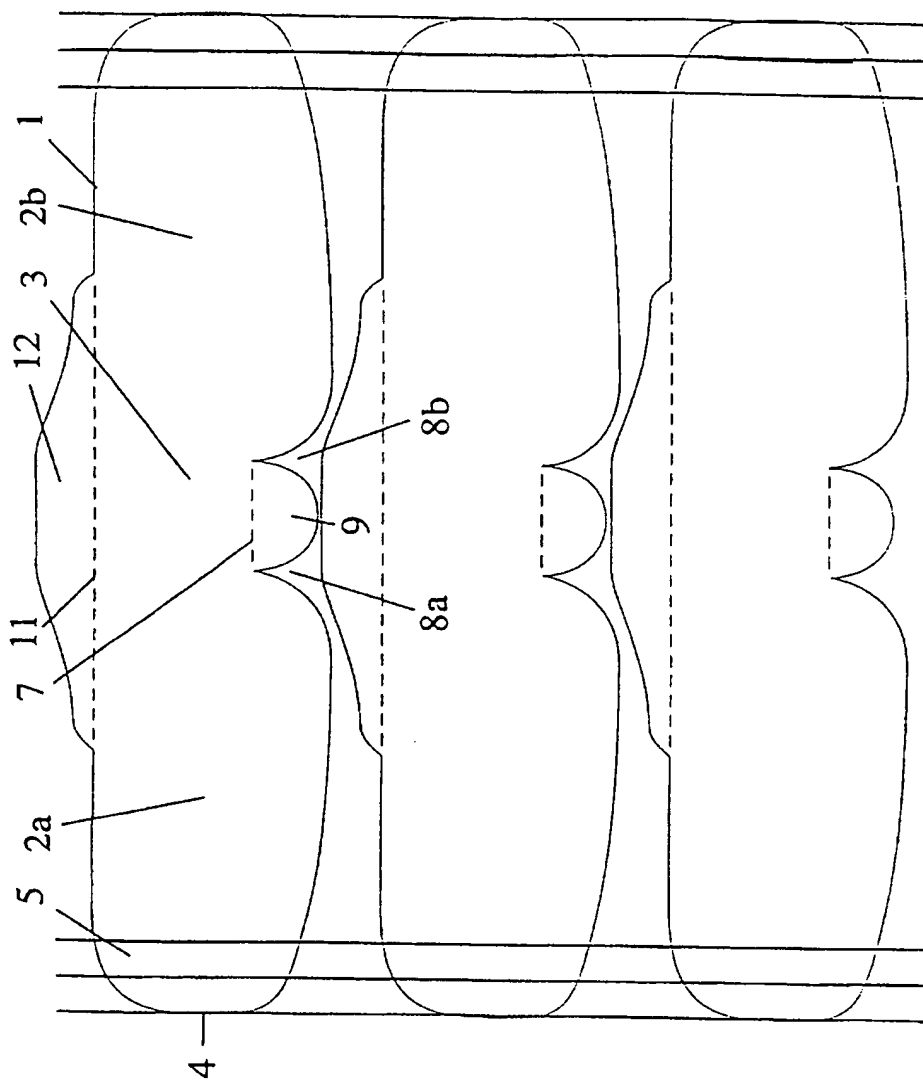


Figure 4



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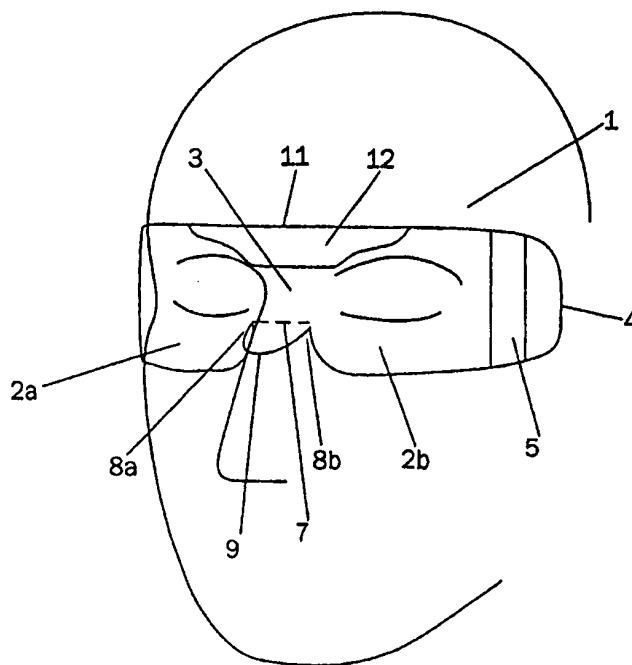
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| (21) International Application Number: PCT/NZ96/00137 (22) International Filing Date: 9 December 1996 (09.12.96) (30) Priority Data: 280639 8 December 1995 (08.12.95) NZ (71)(72) Applicants and Inventors: CORKILL, Bruce, David [NZ/NZ]; 62 Oroua Street, Eastbourne 6008 (NZ). TAYLOR, Gerard, Daniel [NZ/NZ]; 330A The Terrace, Wellington 6001 (NZ). (74) Agent: WEST-WALKER, Gregory, James; Russell McVeagh West-Walker, The Todd Building, Level 5, 171-177 Lambton Quay, Wellington 6001 (NZ). | | (81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> (88) Date of publication of the international search report: 10 December 1998 (10.12.98) |

(54) Title: PROTECTIVE EYEWEAR

(57) Abstract

Protective eyewear (1) comprises an elongated sheet of flexible material (2) comprising either two transparent viewing areas (2a, 2b) separated by a central area (3) or a single transparent viewing area extending substantially the full width of the transparent sheet (2). Means for attaching the eyewear (1) to the wearer comprises at least two skin-compatible adhesive areas (5) on either side (4) of the elongated sheet (2).



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INTERNATIONAL SEARCH REPORT

International application No.
PCT/NZ96/00137**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(6) :A61F 9/00

US CL :2/11

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 2/11, 15; 351/44

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| X | US 4,649,908 A (GHALY) 17 March 1987, see entire document. | 1 and 4 |
| X | DE 2,305,569 A (RUDOLF) 08 August 1974, see entire document. | 1, 4, and 5 |

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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| *P* document published prior to the international filing date but later than the priority date claimed | | |

Date of the actual completion of the international search

30 MAY 1997

Date of mailing of the international search report

06 JUN 1997

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International application No.
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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☒ Claims Nos.: 6-9
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

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